

PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number Q64991
Mail Stop AF Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450	Application Number 09/935,568	Filed August 24, 2001
	First Named Inventor Stefan Paul KELLER-TUBERG	
	Art Unit 2616	Examiner Dmitry Levitan
	WASHINGTON OFFICE 23373 <small>CUSTOMER NUMBER</small>	
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.		
This request is being filed with a notice of appeal		
The review is requested for the reasons(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.		
<input checked="" type="checkbox"/> I am an attorney or agent of record. Registration number <u>28,703</u> _____ /DJCushing/ Signature		
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<u>November 17, 2008</u> <small>Date</small>		

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q64991

Stefan Paul KELLER-TUBERG

Appln. No.: 09/935,568

Group Art Unit: 2616

Confirmation No.: 8849

Examiner: Dmitry Levitan

Filed: August 24, 2001

For: IMPROVED MULTICASTING IN IP DISTRIBUTIVE NETWORKS

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MAIL STOP AF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to the Pre-Appeal Brief Conference Pilot Program, and further to the Examiner's Final Office Action dated July 17, 2008, Applicant files this Pre-Appeal Brief Request for Review.

The present application includes claims 13-26. All claims are rejected as unpatentable over Hooper (USP 5,671,225) in view of Rothschild (USP 6,226,686).

Claim Requirements:

All independent claims require the following three elements: (1) a unidirectional information flow from the multicast router to the subscriber access node over a point-to-multipoint connection; (2) a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point connections; and (3) at the subscriber access node, replication of the incoming unidirectional information flow from the router to form separate unidirectional multicast information flows sent from the subscriber access node to each of the end users over respective point-to-point links.

Claim Requirement (1) Is Not Taught:

In Hooper, multimedia servers 200 communicate with client 10 via a bidirectional data (104 and 106) and control (105 and 107) paths (col. 3, lines 13-17). The examiner relies in the link 104 in Hooper as the claimed unidirectional information flow from the router to the access node. 104 is a unidirectional link, but the examiner ignores the fact that it works together with a unidirectional link 106 in the opposite direction, together the two links providing bidirectional information flow. But since the bidirectional data flow takes place in part over a unidirectional link 104, let it be assumed for purposes of this appeal that this satisfies the claim requirement of a unidirectional data flow. What is still missing is that the claimed unidirectional data flow is (a) from the multicast router, (b) to the subscriber access node, and (c) over a point-to-multipoint link.

The link 104 is from servers 200 to client 10. In the final Office action mailed May 17, 2008, the examiner clarifies that he considers the elements 200-203 to be the claimed multicast router, but element 200 is a server, and is never described by Hooper as anything other than a server. It is not a “server/router” as characterized by the examiner, and there is no description in Hooper of having the servers 200 perform any routing function.

The server 200 also does not “comprise” elements 201-203 as characterized by the examiner. The elements 201-203 are separate from the server 20 and serve entirely different functions. The examiner alleges that the elements 201-203 perform routing functions, but this is not true and in any event would not address the deficiency in Hooper’s teaching of this claim limitation. The link 104 is not from the elements 201-203 to the client 10, so is not from even the elements the examiner identifies as performing a routing function.

Further, while elements 201 and 202 perform routing functions, and are in fact described by Hooper as routers, they are disposed in a control data connection path between the servers 200 and clients 10, and they communicate with the client 10 is via the bidirectional control link 105, not the unidirectional data link 104. There is no unidirectional information flow from the routers 201 and 202 to the clients.

And element 203 in Hooper does not perform any routing function, nor has the examiner identified any support in Hooper for his characterization of element 203 as part of a router. Element

Pre-Appeal Brief Request for Review
USSN 09/935,568

203 is a server management unit and is described by Hooper at lines 43-55 of column 3 as managing server resources. There is no suggestion that it performs any routing function.

Thus, there is no suggestion in Hooper that the unidirectional link 104 is “from a multicast router” as required in the claims.

Further, there is no teaching in Hooper that the link 104 is a point-to-multipoint link. The examiner refers to lines 60-65 of column 1, but this passage is simply a very broad characterization of some prior art systems, and does not at all mean that the link 104 is point-to-multipoint. In the final Office action mailed July 17, 2008, in response to this distinguishing argument, the examiner simply notes that Hooper teaches multicasting to deliver information from a server to multiple clients. But the examiner is mistaken on at least two points. First, as already noted, the mention of multicasting in Hooper is in a description of the collective prior art. It is not even referring to a single prior art system, but simply lists the various types of systems available in the prior art. So the excerpt quoted by the examiner is simply a recognition that multicasting is known. It is not a teaching that the Hooper system described later in the specification is capable of multicasting.

More importantly, even assuming Hooper is capable of multicasting, that does not require that the link 104 be a point-to-multipoint link. Hooper illustrates only one client connected to link 104. Hooper does not say whether other clients would be connected to the server over respective different links, or whether additional clients would be connected to the same link 104.

Finally, there is no mention in Hooper of a subscriber access node, so not only is there no teaching of the link 104 being *from a multicast router*, and no teaching that it is a *point-to-multipoint link*, but there is also no teaching that it is *to a subscriber access node*. The examiner has relied on Rothschild to teach the use of subscriber access nodes, but there is no mention in Rothschild of a subscriber access node, the examiner simply arguing that it would be inherent somehow in the distribution arrangements shown in Rothschild. Thus us untrue, but even if true, the examiner has made no attempt to explain how or why, if a subscriber access node were used in Hooper, it would be connected to a router over a unidirectional information link from. There is no unidirectional link in Hooper from its router to the client, and no reason to assume that such a unidirectional link would be provided if a subscriber access node were added to Hooper.

Claim Requirement (2) Is Not Taught:

Element (2) identified above and required by all independent claims is a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-multipoint connections. Hooper shows bidirectional flow of data from the router 201 to the client 10, but there is no description of how the router 201 would be connected to the clients if multiple clients were included, i.e., no discussion of whether separate point-to-point links would be provided for each client. Further, there is no discussion as to whether, if a subscriber access node were to be used, a bidirectional link from the router would terminate at the subscriber access node or would be continued all the way to each end user.

Claim Requirement (3) Is Not Taught:

The last element (3) of the claimed invention is replication of the unidirectional data flow at the subscriber access node and sending the data out to each end user over a respective point-to-point links. Hooper does not describe a subscriber access node, and certainly does not describe any replication at such a subscriber access node.

Recognizing this last-mentioned deficiency in Hooper, the examiner relies on Rothschild. The examiner refers to Fig. 8 and the description thereof at column 7, but these do not teach the features missing from Hooper.

In Fig. 8 of Rothschild, a multicast server 105 communicates with host systems 112-115 over a point-to-multipoint connection 111. Lines 40-44 of column 8 explain that the cells carried by the point-to-multipoint connection 111 are replicated at the branching points of the network tree and are then forwarded down the branching network links. This is the conventional approach to replication acknowledged in the Background discussion of the present application. The solution provided by the present invention is to put off replication until the end of the path, at the subscriber access node, and Rothschild teaches directly away from this at lines 40-44 of column 7 and in Fig. 8.

If one of skill in the art were to consider both Hooper and Rothschild, it is submitted that the only obvious combination of the two would have been to do what Rothschild shows in Fig. 8, in the distribution system of Fig. 2 of Hooper, i.e., the connection 104 in Hooper would be implemented

Pre-Appeal Brief Request for Review
USSN 09/935,568

as shown in Fig. 8 of Rothschild, with the multicast information data being replicated at the branching points of the network. This would result in the prior art acknowledged in the Background section of the present application. Neither of Hooper or Rothschild even discusses subscribe access nodes, so it is clear that neither reference teaches the deferral of information replication until the subscriber access node.

In the final Office action mailed July 17, 2008, the examiner's only response to this failure in the teaching of the applied art is to dismiss the argument on the grounds that it is irrelevant because the claims do not recite putting off replication until the end of the data path. The examiner has apparently ignored the last two paragraphs of claim 13 which recite replicating in the subscriber access node, once for each subscriber, and sending separate replicated flows to each subscriber. Neither of the references mentions a subscriber access node, and neither can possibly teach putting off replication until a subscriber access node. And Rothschild teaches replication at network branching points, not at subscriber access nodes.

Conclusion:

For all of the above reasons, it is submitted that there is no *prima facie* case of obviousness, and the rejection should be reversed.

Respectfully submitted,

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